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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/332,760	06/14/1999	DOUGLAS CLAFFEY		3302

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EXAMINER

JONES, HUGH M

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 01/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/332,760Applicant(s)
Claffey et al.Examiner
Hugh JonesArt Unit
2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 3, 1999
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2 20) ☐ Other:

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DETAILED ACTION

Introduction

1. Claims 1-35 of U. S. Application 09/332,760 filed on 06-14-1999, are presented for examination.

Information Disclosure Statement

2. Applicants refer to "Exhibits (5 enclosures)" on the letter accompanying the IDS. The Examiner has inspected the application and can not locate any "exhibits". Furthermore, said exhibits are not listed on the IDS. The Examiner assumes that the exhibits are not related to information which should be considered.

3. The following non-patent literature reference appears listed in the specification (page 9, lines 21-23): Satellite Took (sic) Kit systems analysis program, cert. Nos. TX4-819-009, TX4-819-010 and TX4-819-011.

- The text accompanying the reference provides a short description which indicates that the listed reference, *which Applicants have attempted to incorporate*, is very relevant and appears to be *essential* to the instant invention and claims, and therefore the applicant should provide the office with copies of the references so that they may further be evaluated for relevance.

- Applicants have not provided sufficient detail to make and/or use the invention, as discussed in the 112 rejections. The Examiner assumes that the missing details were disclosed in the incorporated reference.

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- Applicant is **reminded** of their duty to disclose all information material to the patentability of the application. See 37 C.F.R. 1.56 Duty to disclose information material to patentability.

Specification - Incorporation by Reference

4. The attempt to incorporate subject matter into this application by reference (lines 21-23, page 8, specification) is improper for the following reasons:

- the material *appears to be essential*, as it relates to the derivation and use of the satellite visualization techniques for determining obscuration of sensors that are mounted on a spacecraft.

- The Examiner assumes that the missing details were disclosed in the incorporated reference - thus rendering the non-patent literature essential.

- the essential material material consists of non-patent literature. Please note section 608.01 (p) of the MPEP.;

- the attempt at incorporation of the non-patent literature is deficient because Applicants appear to only have incorporated a *registration number* (note the wording in lines 21-23, page 8, specification).

- the material was incorporated in its entirety without any specific reference to a particular teaching within the three incorporated documents (this also applies to U. S, Patent 5,864,489 - lines 13-16, page 2, specification) - this is improper as will be later discussed;

5. Furthermore, "means for" claims (claims 27-29) may not rely on incorporated material, as will be discussed.

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Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. **Claims 19-24 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either an asserted utility or a well established utility.**

8. An invention which is eligible for patenting under 35 U.S.C. § 101 is in the “useful arts” when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. *The fundamental test for patent eligibility is thus to determine whether the claimed invention produces a “useful, concrete and tangible result.”* The test for practical application as applied by the examiner involves the determination of the following factors:

(1) “Useful” - The Supreme Court in *Diamond v. Diehr* requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the claimed invention to determine whether the asserted utility is accomplished. Applying utility case law the examiner will note that:

(a) the utility need not be expressly recited in the claims, rather it may be inferred.

(b) if the utility is not asserted in the written description, then it must be well established.

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(2) “Tangible” - Applying *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. § 101. In *Warmerdam* the abstract idea of a data structure became capable of producing a useful result when it was fixed in a tangible medium which enabled its functionality to be realized.

(3) “Concrete” - Another consideration is whether the invention produces a “concrete” result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C. § 101 should be accompanied by a lack of enablement rejection, because the invention cannot operate as intended without undue experimentation.

A “propagated signal” does not appear to be useful, concrete or tangible.

9. The Examiner respectfully submits, under current PTO practice, that claims 19-24 do not recite a *either a tangible or a concrete result*.

10. *Claims 23-24* claim a “*propagated signal...*”. However, there is no transformation of matter. The Examiner presumes that Applicants are referring to signal embodied on a signal bearing medium. Even if this were the case, it should be noted that code (i.e., a computer software program) does not do anything per se (*which is the defect in claims 19-22*). Instead, it is the code stored on a computer that, *when executed*, instructs the computer to perform various functions. The following claim is a generic example of a proper computer program product claim;

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A computer program product embodied on a computer-readable medium and comprising code *that, when executed*, causes a computer to perform the following:

Function A

Function B

Function C, etc...

It is suggested that Applicants rephrase the preamble to recite "...computer program product" or "Signal bearing medium" "*embodying a program of instructions that when executed by the machine cause the machine to perform...*" or some similar phraseology.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. **Claims 1-35 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

- Applicants have only disclosed generalities of the claimed invention. There is no detailed disclosure relating to any of the claim limitations. It appears a reader would have to reinvent the invention.

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- in order to facilitate compact prosecution of the instant application, the Examiner suggest that Applicants supply their computer code in any response to this Official Office Action so that the Examiner can determine without question that Applicants had possession of the invention at the time the application was filed.

13. Claims 1-35 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- Applicants have only disclosed generalities of the claimed invention. There is no detailed disclosure relating to any of the claim limitations. It appears that a reader would have to reinvent the invention in so far as undo experimentation would be required to make and/or use the invention.

- in order to facilitate compact prosecution of the instant application, the Examiner suggest that Applicants supply their computer code in any response to this Official Office Action.

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 23 (and claim 24 which inheres the deficiency) recites "by said animation code" in the 4th limitation (presumably referring to "an animation signal segment" as per the first limitation). It also recites "quantifying code segment" (last limitation) which presumably refers to the preceding limitation. There is insufficient antecedent basis for these

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limitations in the claims. An argument that there is not an antecedent problem would lead to the implied equivalence between “signal” and “code”. The preamble would then be interpreted as “A *propagated code* for use...”, which does not appear to make sense.

16. **Claims 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** These claims recite *signal segments*. The meaning of such phrases is ambiguous.

Claim Interpretations

17. The broadest reasonable interpretation has been given to the claims.

18. Claims 27-29 have been interpreted in view of 35 U.S.C. 112, and *In re Donaldson*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994). Reciting the pertinent section of 35 U.S.C. 112, paragraph six:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

19. There are a number of issues relating to incorporation by reference and the 112(1) rejections which are addressed because they affect claim interpretation. It is noted that the present application attempts to incorporate non-patent literature in the specification as discussed. However, this is an improper incorporation by reference. Reference in the instant application to the incorporated literature in the parent application is not acceptable because, at minimum: 1) it appears to be essential matter (essential matter may not be incorporated from non-patent

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literature) and, 2) “means for” claims may not rely on any incorporated material (see Atmel Corp. v. Information Storage Device, Inc., discussed later).

20. Section 2163.02 of the MPEP Standard for Determining Compliance With the Written Description.

“The courts have described the essential question to be addressed in a description requirement issue in a variety of ways. *An objective standard for determining compliance with the written description requirement is, "does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed."* In *re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Under *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), *to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter."* *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)).

Whenever the issue arises, the fundamental factual inquiry is whether a claim defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed. The subject matter of the claim need not be described literally (i.e., using the same terms or in haec verba) in order for the disclosure to satisfy the description requirement. If a claim is amended to include subject matter, limitations, or terminology not present in the application as filed, involving a departure from, addition to, or deletion from the disclosure of the application as filed, the examiner should conclude that the claimed subject matter is not described in that application. This conclusion will result in the rejection of the claims affected under 35 U.S.C. 112, first paragraph - description requirement, or denial of the benefit of the filing date of a previously filed application, as appropriate. 220 F.3d 1345, 55 U.S.P.Q.2d (BNA) 1636 (Fed. Cir. 2000).”

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21. Enablement and written description are separate and distinct issues as it relates to the question of incorporation by reference. A rejection based on the enablement requirement of the statute may not be sustainable in this regard since the general incorporation of a U.S. patent by reference in appellant's specification may be sufficient to indicate what is likely to be known by persons of ordinary skill in the art. Cf. *In re Howarth*, 654 F.2d 103, 210 USPQ 689 (CCPA 1981). *The issue of compliance with the description requirement, however, is another matter entirely.* In this connection, attention is directed to *In re Blaser*, 556 F.2d 534, 194 USPQ 122, 125 (CCPA 1977). The function of the description requirement is to ensure that the applicant had possession, as of the filing date of his application, of the specific subject matter later claimed by him. It is required that the specification describe the invention sufficiently for those of ordinary skill in the art to recognize that the applicant invented the subject matter he now claims. In *re Smythe*, 480 F.2d 1376, 178 USPQ 279, 284 (CCPA 1973). That a person skilled in the art, given the incorporated disclosures, *might* decide to combine the teachings with those explicitly disclosed by Applicants is not a sufficient indication to that person that such is described as a particular feature of appellant's invention. *The doctrine of incorporation by reference is of no avail to applicants in this regard since there is no specific indication in the instant specification of the particular features disclosed by the incorporated references which correspond to those as claimed; nor does the specification identify the specific portions of the patent which applicant may have intended to rely upon to supplement his disclosure.* The purpose of incorporation by reference in an application of matter elsewhere written down is for

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economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found. In re de Seversky, 474 F.2d 671, 177 USPQ 144, (CCPA 1973).

22. Relevant legal decisions include the following:

Ex parte Raible (BdPatApp&Int) 8 USPQ2d 1709. General incorporation of prior art patent by reference in applicant's specification is sufficient to indicate what is likely to be known by persons of ordinary skill in art. The description requirement of 35 USC 112 is designed to ensure that applicant had possession, as of filing date of application, of specific subject matter later claimed, and specification must describe invention sufficiently for those of ordinary skill in art to recognize that applicant has invented subject matter claimed.

See 1710:

“The issue of compliance with the description requirement, however, is another matter entirely. In this connection, attention is directed to In re Blaser, 556 F.2d 534, 194 USPQ 122, 125 (CCPA 1977). *The function of the description requirement is to ensure that the applicant had possession, as of the filing date of his application, of the specific subject matter later claimed by him. It is required that the specification describe the invention sufficiently for those of ordinary skill in the art to recognize that the applicant invented the subject matter he now claims.* In re Smythe, 480 F.2d 1376, 178 USPQ 279, 284 (CCPA 1973). That a person skilled in the art, given the Bentley disclosure, might decide to employ a helically disposed heat exchange conduit in a separate heating unit of a blood oxygenator is not a sufficient indication to that person that such is described as a particular feature of appellant's invention. *We believe that the doctrine of incorporation by reference is of no avail to appellant in this regard since there is no specific indication in the instant specification of the particular features disclosed by Bentley which correspond to those intended for use in the here-claimed device; nor does the specification identify the specific portions of the patent which appellant may have intended to rely upon to*

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supplement his disclosure. The purpose of incorporation by reference in an application of matter elsewhere written down is for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found. In re de Seversky , 474 F.2d 671, 177 USPQ 144, (CCPA 1973). Moreover, the Bentley disclosure itself does not appear to include sufficient descriptive language to specifically support the combination recited in the appealed claims, i.e., "a heat exchange conduit helically disposed in effective heat exchange relationship with, but not in, the bubble column of said oxygenator". Appellant has not shown otherwise.

For the sake of completeness, we take notice of the decision in In re Voss , 557 F.2d 812, 194 USPQ 267 (CCPA 1977). We recognize that Voss , like the present case, involved an attempt to rely upon the incorporation by reference of a U.S. patent for descriptive support of a particular limitation in the claims. However, the decision in Voss is not dispositive of the issue before us, and is distinguishable on its facts for the following reasons:

(1) In Voss , the incorporating statement particularly referred to the aspect of the patent which was being relied upon, i.e., "for a general discussion of glass-ceramic materials and their production". *Here, as previously indicated, there is no reference in the incorporating statement to any specific portion or aspect of the Bentley disclosure. Actually, the incorporating statement involved here more broadly refers to several patents with no specific indication of the relevance of each to the claimed invention.*

(2) In Voss , the disputed claim limitation was found in all the claims of the incorporated patent and was apparently the central focus of the patent disclosure; whereas, the disputed claim language here is not found in any claims of the Bentley patent and, at best, may be incidentally derived only after studying both the Bentley specification and drawings.

(3) In Voss, the incorporated patent was merely being relied upon to clarify the definition attributed in the art to certain terminology, namely "glass-ceramic material". *Here, even the incorporated document itself does not clearly disclose the claimed combination in language which essentially corresponds to that employed in the appealed claims."*

See Atari Games Corp. v. Nintendo of America Inc. (DC NCalif) 30 USPQ2d 1401)

including:

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1415: "The purpose of the "written description" requirement is broader than to merely explain how to "make and use"; the applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 [19 USPQ2d 1111] (Fed. Cir. 1991) (emphasis in original)."

1416: "1. Standard for Anticipation

Anticipation is an issue of fact. *Scripps Clinic*, 927 F.2d at 1576. The Federal Circuit has made clear that the standard for anticipation is fairly strict:

Invalidity for anticipation requires that all of the elements and limitations of the claim are found within a single prior art reference . . . There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention . . . *The role of extrinsic evidence is to educate the decision-maker to what the reference meant to persons of ordinary skill in the art, not to fill gaps in the reference.*

Id. (citations omitted). Primarily at issue in this motion is the doctrine of "inherency" which allows "modest flexibility . . . [in] situations where the common knowledge of technologists is not recorded in the reference; that is where technological facts are known to those in the field of the invention, albeit not known to judges." *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1269 [20 USPQ2d 1746] (Fed. Cir. 1991). See also *Standard Havens Products, Inc. v. Gencor Industries, Inc.*, 953 F.2d 1360, 1363 [21 USPQ2d 1321] (Fed. Cir. 1991) ("An anticipatory reference, however, need not duplicate word for word what is in the claims. Anticipation can occur when a claimed limitation is 'inherent' or otherwise implicit in the relevant reference."), cert. denied, 113 S. Ct. 60 (1992). Even under an inherency theory, however, Atari's burden of proof remains high. *Continental Can*, 948 F.2d at 1268 (Evidence of inherency "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill."). "

1419: "Nintendo correctly points out that *Atari has stretched the doctrine of incorporation by reference too far. Even the case relied upon by Atari, In re Saunders*, 444 F.2d 599 [170 USPQ 213] (C.C.P.A. 1971), makes clear

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that anticipation could be found only if Roe referred explicitly to the part of the FIPS 46 document that teaches the use of microprocessors. Id at 602. The reference to FIPS 46 in Roe is meant simply to identify a "suitable data encryption algorithm," not to describe the physical circuits that could be used in the security system. To discover that FIPS 46 teaches the use of microprocessors, an inventor would have to read more than the section of FIPS 46 which describes the DES algorithm. *Since Atari's anticipation theory requires the use of a part of the FIPS 46 document which is "not clearly referred to" by the prior art patent, Atari again is presenting an argument for obviousness, rather than anticipation.* Id. 26 The Court therefore FINDS, as a matter of law, that Roe does not anticipate the use of microprocessors for the security system. ”

See: Modine Manufacturing Co. v. U.S. International Trade Commission: (CA FC) 37

USPQ2d 1609, 1614:

“2. The Incorporation by Reference

The '580 specification incorporates by reference a patent entitled "Method of Making a Heat Exchanger," U.S. Patent No. 4,688,311 (the '311 patent). The '580 specification states that the '311 patent describes a "highly preferred means by which the tubes 20 with accompanying spacers 40 may be formed." Modine places great weight on this incorporation to support its position that "relatively small" is correctly construed to mean hydraulic diameters up to 0.07 inch, for the '311 patent states:

The invention may be used with particular efficacy where the flow passages are to be of relatively small hydraulic diameter as, for example, 0.07 inches or less. When such dimension is selected, particularly where the hydraulic diameter is 0.040 inches or less, the structure is ideal for utilization in a high efficiency condenser.

Modine stresses that the '311 patent defines "relatively small" as "0.07 inch or less," and that incorporation by reference has the same effect as if the host patent had set forth the entire text of the incorporated document. See In re Lund, 376 F.2d 982, 989, 153 USPQ 625, 631 (CCPA 1967).

However, incorporation by reference does not convert the invention of the incorporated patent into the invention of the host patent. The use of "relatively small" to describe the condenser flow paths to which the '311

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manufacturing method is applicable did not reinstate into the parent and the child applications the hydraulic diameter range that was deleted from the grandparent. The words "relatively small" appear only once in the '580 specification, and do not change the presentation of the invention as defined by the hydraulic diameter numerical range stated throughout the specification:

In addition to the utilization of a relatively small hydraulic diameter for the flow paths as mentioned previously, as another facet of the invention, it is contemplated that each of the flow paths have at least one crevice preferably extending along the entire length of the flow path, . . .

"Relatively small" does not appear to have an independent meaning in this art that would distinguish between 0.040 and 0.070 inch. In view of the replacement of the "relatively small" parameter of about 0.070 in the grandparent application with the "relatively small" parameter of about 0.040 in the parent and child applications, it does not appear to be correct to read the scope of "relatively small" in the '311 patent as overriding that replacement."

See: *In re Saunders and Gemeinhardt*, 170 USPQ 213 (CCPA 1971) wherein rejection under 35 U.S.C. 102 can be sustained only on theory that first reference *expressly incorporates a particular part of patent by reference*; if it would require combining some other part of patent, not clearly referred to by first reference, so that the two references are being used to show obviousness, the two references together cannot constitute an "anticipation" in technical sense of that term in patent law. In particular, see 216-217, wherein,

"The section 102 rejection in this case can be sustained only on the theory that Hostettler expressly incorporates a particular part of Bailey by reference. If it would require combining some other part of Bailey, not clearly referred to by Hostettler, so that the two references are being used to show obviousness to one of ordinary skill in the art, the two references together simply cannot constitute an "anticipation" in the technical sense of that term in patent law. Pat. L. Persp., § A.1, Dev.A.1-10 (Nov. 1970). "

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See *Advanced Display Systems Inc. v. Kent State University* (CA FC) 54 USPQ2d 1673.

Invalidity by anticipation requires that the four corners of a single prior art document describe every element of the claimed invention, either expressly or inherently, including material that is properly incorporated by reference. Incorporation by reference is a legal, not a factual question, and thus the judge (not jury) must decide whether material is properly incorporated by reference. *To incorporate material by reference, the document must identify with detailed particularity the specific material it incorporates and clearly indicate where that material is found in the various documents.* Note 1679-1680, wherein:

"Section 102(b) provides that "a person shall be entitled to a patent unless the invention was patented or described in a printed publication . . . more than one year prior to the date of the application." 35 U.S.C. Section 102(b) (1994). Accordingly, invalidity by anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation. See *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994). Material not explicitly contained in the single, prior art document may still be considered for purposes of anticipation if that material is incorporated by reference into the document. See *Ultradent Prods., Inc. v. Life-Like Cosmetics, Inc.*, 127 F.3d 1065, 1069, 44 USPQ2d 1336, 1339-40 (Fed. Cir. 1997) (holding that material incorporated by reference into a document may be considered in an anticipation determination). Incorporation by reference provides a method for integrating material from various documents into a host document--a patent or printed publication in an anticipation determination--by citing such material in a manner that makes clear that the material is effectively part of the host document as if it were explicitly contained therein. See *General Elec. Co. v. Brenner*, 407 F.2d 1258, 1261-62, 159 USPQ 335, 337 (D.C. Cir. 1968); *In re Lund*, 376 F.2d 982, 989, 153 USPQ 625, 631 (CCPA 1967). *To incorporate material by reference, the host document must identify with*

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detailed particularity what specific material it incorporates and clearly indicate where that material is found in the various documents. See *In re Seversky*, 474 F.2d 671, 674, 177 USPQ 144, 146 (CCPA 1973) (providing that incorporation by reference requires a statement "clearly identifying the subject matter which is incorporated and where it is to be found"); *In re Saunders*, 444 F.2d 599, 602-03, 170 USPQ 213, 216-17 (CCPA 1971) (*reasoning that a rejection for anticipation is appropriate only if one reference "expressly incorporates a particular part" of another reference*); *National Latex Prods. Co. v. Sun Rubber Co.*, 274 F.2d 224, 230, 123 USPQ 279, 283 (6th Cir. 1959) (requiring a specific reference to material in an earlier application in order have that material considered part of a later application); cf. *Lund*, 376 F.2d at 989, 153 USPQ at 631 (holding that a one sentence reference to an abandoned application is not sufficient to incorporate material from the abandoned application into a new application)."

See *Procter & Gamble Co. v. Nabisco Brands Inc.* (DC Del) 9 USPQ2d 1985, 1988, wherein,

" (c) Incorporation by Reference

Patent '333 incorporates by reference patent '969 as an alternative method of production. Column 12, lines 48-51 of patent '333 state: "While the foregoing illustrates a preferred mode of practicing the present invention, other executions of the basic concepts of the present invention can also be practiced." D.I. 739, Exhibit 1. From column 12, line 67, to column 13, line 4, patent '969 is identified as one such "other execution": "One method of preparing the cookies of this invention is the single dough invertase process of Youngquist . . . U.S. Pat. No. 4,333,969 . . . which is hereby incorporated herein by reference." Id. *The purpose of incorporation, therefore, was not to lay a building block for patent '333 but only to refer the reader to a different, unrelated method.* The facts pleaded by Defendants indicate that the process described in patent '333 does not depend on the teachings of patent '969. D.I. 739 at 9-10. Regardless of whether the Court could ever incorporate the inequitable conduct of a patent along with its teachings, 7 the Court will not do so here. *Patent '333 is entirely independent of patent '969.* In addition, whether patent '969 is unenforceable or not has little

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bearing on the validity of what it teaches. The independent source of an additional method of production makes any "connection" extremely attenuated.

Another incorporation issue is the incorporation by patent '969 of application serial number 220,643, one of the applications that led to patent '333. Column 1, lines 63-68 of patent '969 state: "Cookie texture can be quantified, as described in . . . Ser. No. 220,643 . . . which is hereby incorporated by reference, in terms of stiffness . . . and plasticity. . . ." D.I. 739, Exhibit 2. This incorporation refers to a method of quantifying cookie texture, not a method of making dual-textured cookies. Undoubtedly, a process to vary the texture within a cookie must use some method of quantifying texture. The crux of patent '333, however, is how to make dual-textured cookies, not how to measure the textural differences. Although such measurements are relevant to the patent '333 process, they are unrelated to the patent's basic teaching, i.e., the use of two types of sugar to obtain the desired texture. By themselves, therefore, such measurements have an insufficient nexus to the process of production to establish a "connection" between patent '333 and patent '969."

See *Tronzo v. Biomet Inc.* (DC SFla) 41 USPQ2d 1403, 1408, wherein,

"To meet the written description requirement of Section 120, the specification of the parent application must have "claim-supporting language" which provides a description of the invention claimed, not merely "claim-anticipating language." *Id.* at 1562 (citing *In re Lukach*, 442 F.2d 967 [169 USPQ 795] (C.C.P.A. 1971)). In short, the claim-supporting language "must clearly allow persons of ordinary skill in the art to recognize that [the applicant] invented what is claimed." *Id.* at 1116 (quoting *In re Gosteli*, 872 F.2d 1008, 1012 [10 USPQ2d 1614] (Fed. Cir. 1989)). The proper test is "whether the disclosure in the [parent] application reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter." *Id.* at 1563 (giving the test from *In re Kaslow*, 707 F.2d 1366, 1375 [217 USPQ 1089] (Fed. Cir. 1983)).

This test can be satisfied either by an "express" or an "inherent" disclosure of the invention claimed. *In re Lukach*, 442 F.2d 967, 969 [169 USPQ 795] (C.C.P.A. 1971) (analyzing both methods). Even an "inherent" disclosure, though, must make the inventor's possession of the claimed invention obvious. Thus, the written description requirement of section 112 cannot be satisfied by disclosing only one embodiment or species of an invention while claiming the whole

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genus or claiming a different embodiment or species. Unlike the enablement provision of section 112, where disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any other member of the genus, see *Milliken Research Corp. v. Dan River, Inc.*, 641 F. Supp. 4 (W.D. Va. 1982), *aff'd*, 739 F.2d 587 [222 USPQ 571] (Fed. Cir. 1984) (enablement case), the written description requirement of Section 112 requires more. See *Vas-Cath*, *supra*. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See *id.* at 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently.

In light of this law, Biomet's first contention is that Dr. Tronzo's '589 patent does not meet the written description requirement of Section 112, upon which Section 120 depends, so as to entitle the '262 claims for a hemispherically shaped cup to the benefit of the filing date of the '589. A close review of the specification of the '589 patent application suggests that Biomet is correct. Nowhere in the application does the word "hemisphere" or "hemispherical" appear. At best, Dr. Tronzo refers only indirectly to hemispherical shapes. In one place, he discusses the "Field of the Invention" and incorporates two earlier patents on hemispherical cups "for purposes of delineating an art area." (A23). *By its own terms, the purpose of this incorporation is narrow and serves only to review the prior art, not to describe the current invention.*"

23. With respect to "means for" claims (see claims 27-29, for example), see *Atmel Corp. v. Information Storage Device, Inc.*, 198 F.3d 1374 (Fed. Cir. 1999). In *Atmel*, the Federal Circuit reversed summary judgment that a means-plus-function claim was invalid for indefiniteness because the corresponding structure was in an article that had been incorporated by reference. Here, the majority explained that the search for corresponding structure should be done from the vantage point of one skilled in the art (i.e., the structure need not be explicit if it would clear to a skilled artisan). *The court went on to say that the structure supporting the means-plus-function*

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element must appear in the specification. A patent may not rely on a document that is incorporated by reference to support structure corresponding to a means-plus-function limitation in a claim. The structure corresponding to the recited function must be described within the four corners of the patent specification. The court also discussed the use of extrinsic evidence to construe a means-plus-function claim and to find corresponding structures.

24. With respect to the “means for” claims (claims 27-29), it is interpreted that the structure corresponding to the recited functions is only that which is described within the four corners of the instant patent specification.

No Art Rejection - Indefinite and Incomplete Claims

25. **Because the claims are so indefinite and incomplete, no art rejection is warranted as substantial guesswork would be involved in determining the scope and content of these claims.** Note the 112 rejections. See *In re Steele*, 305 F.2d 859, 134 USPQ 292 (CCPA 1962); *Ex parte Brummer*, 12 USPQ 2d, page 1654; and also *In re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Prior art pertinent to the disclosed invention is nevertheless cited and Applicants are reminded that they must consider all cited art under Rule 111(c) when amending the claims to conform with 35 U.S.C. 112. The Examiner respectfully submits that it would be unreasonable, if not impossible to apply art rejections against these claims in view of the 112(1) issues, as discussed. Applicants have not disclosed the claimed features sufficiently that a proper search can be carried out.

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Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1) *STK/Visualization Option* - (STK/VO) is the leading 3D visualization package for the space industry. While STK/VO provides the backbone for performing all of the necessary 3D rendering for the STK product suite, STK/Advanced VO empowers users with advanced visualization and output optimization.

Key Features

Complete 3D rendering of the STK Product Suite. STK/Advanced VO includes all of the STK/VO functionality and features.

High-resolution output images. STK/Advanced VO allows users to capture individual frames of output at any user specified dimension and resolutions up to 600 dpi for professional quality images for almost any application. Additional output enhancements within STK/Advanced VO include daylight/blue sky modeling, specular Earth modeling and anti-aliasing for super-crisp satellite models and imagery borders.

Viewpath Editor for studio-quality animations and video productions. While STK/VO gives you the capability to create and save time-dependent viewer positions and directions and capture sequential STK/VO frames for assembly into animations and/or video production, STK/Advanced VO further enhances your playback capabilities by providing the viewpath editor which provides the user a "flying camera" for dramatic recording effects. Users can specify camera locations and effective rates of change of viewing locations by time-tagged camera locations. The camera can be set to follow any object within the STK/Advanced VO scenario and transitions from individual recording sequences are automatically calculated within STK/Advanced VO. Once you have completed the viewpath, it can be animated forward and backward to test acceptance prior to recording the desired frames. These frames of VO images

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can be made into AVIs, GIFs, or JPGs using most commercial image-editing packages. STK/VO and STK/Advanced VO animations can be used separately or embedded in documents, for high-quality presentations to executives/investors/customers.

Terrain visualization. Allows you to visually display, in 3D, detailed terrain data as you maneuver a "fly-through" sequence with dynamic updating of the terrain resolution as it approaches your field of view. STK/Advanced VO is capable of visualizing varied formats of terrain data - including MUSE raster file (.dte), Digital Elevation Model (.dem), NIMA terrain (.dmed) and AGI World Terrain (STK/Terrain). Combining terrain visualization with high-resolution imagery data will provide the ultimate in realism and situational awareness for your theater operations, executive presentations, or launch visualizations.

Solar panel power. Knowing a satellite's available power is critical to aerospace systems designers and planners. Using AGI-patented graphical techniques, STK/Advanced VO can calculate over time the power that a satellite's solar panels generate, the sunlight's angle of incidence against the solar panels, and the cross-sectional area exposed to the sunlight. In addition to the Earth's penumbra and umbra, the calculation also accounts for shadows that the satellite's components cast on its solar panels.

Sensor obscuration. Using AGI-patented graphical techniques, STK/Advanced VO can calculate over time the percentage that a sensor's field-of-view is obscured. The sensor can be obscured by the system on which the sensor resides, other systems, or the Earth (including terrain).

Interplanetary mission visualization. Allows users to select central-body with texture map for all planets of the solar-system to provide stunning 3D views of the solar system for science voyages.

- Note the 17 pages (as numbered by the Examiner) of printouts as obtained from www.stk.com.

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2) *Nelson* discloses a system for detecting an object of interest through a medium such as the atmosphere or ocean employs a reference object from which a reference signal emanates. A detector detects and transforms the reference signal into a transformed reference signal and further detects and transforms an object signal emanating from an object of interest into a transformed object signal. The object signal may be radiated, re-radiated, or scattered from the object of interest. An image processor generates a corrected image signal by applying an image transfer function to convolve the transformed object signal. Then a display presents a corrected image of the object of interest in response to receiving the corrected image signal.

3) *Steinle et al.* disclose a photosensor device which comprises a first photosensor array having a first predetermined number of pixels for generating a first data signal indicative of a first color component image of an object which is imaged thereon; a second photosensor array having a second predetermined number of pixels for generating a second data signal indicative of a second color component image of the object which is imaged thereon; and color registration error correction means operatively associated with the photosensor array for correcting color registration error due to a predetermined difference in image size between the first color component image and the second color component image.

4) *Landecker et al.* disclose a surveying satellite apparatus having an on-board microprocessor to process sensor-provided data from planetary and/or celestial reference scene. The sensor data is compared with the on-board spacecraft database to determine if any misorientation or translation error is present. The spacecraft attitude and ephemeris solutions are autonomously updated to reflect the realtime alignment.

5) *Itoh et al.* disclose an apparatus for separately extracting circular and linear components in a complex image, the apparatus comprising: (a) a circular filter means for covering a portion of the complex image by filter blocks, wherein the filter blocks comprise a center block and at least one set of blocks angularly disposed to encircle the center block; (b) a first calculator element for computing average image concentration value for each of a plurality of directions with

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said circular filter means covering a subject portion of the complex image, wherein the concentration value for one directional component is a maximum; (c) a second calculator element for computing a first feature S in which the values of the directional components are evaluated with maximum directional component being enhanced; (d) a third calculator element for computing a second feature value S' in which the values of the directional components are evaluated with the maximum directional component being weakened; and (e) a mode selector for selectively applying (i) the first feature value S to detect linear image components and (ii) the second feature value S' to detect circular image components.

6) *Landecker* (U. S. Patent 4,679,753) discloses a system for surveying features of a planet includes a novel attitude determination subsystem. A satellite includes an earth imaging sensor (106). The sensor is alternately directed at the earth and a predetermined star field. The optical detections are converted to electronic signals by a sensor electronics module (332). The outputs of the sensor electronics module corresponding to the times when the sensor is directed toward earth are processed by a signal processor (336), the output of which is a data stream which permits image reconstruction by a ground station computer. The outputs of the sensor electronics module corresponding to the times when the sensor is directed toward the star field are directed through onboard star detection thresholding electronics. A programmable threshold device (342) selects detections of target stars within the star field. A star data buffer (344) stores these target star detections for transmission to earth at a convenient time. This data stored by the buffer is compact star attitude determination data required for accurate gridding of the earth image data transmitted from the signal processor. In an alternative embodiment, an earth imaging sensor is occasionally pointed at a limited portion of the star field, such special motion being controlled from the satellite. In both embodiments, compression of star field data is accomplished by means located onboard the satellite. The compressed star field data is subsequently used to accurately determine sensor attitude.

7) *three pages of results of a copyright search* of TX-4-819-???

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27. Any inquiry concerning this communication or earlier communications from the examiner should be:

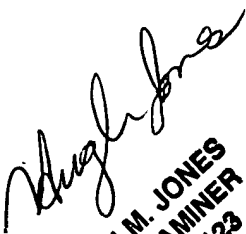
directed to: Dr. Hugh Jones telephone number (703) 305-0023, Monday-Thursday 0830 to 0700 ET, *or* the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to: Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: (703) 308-9051 (for formal communications intended for entry) *or* (703) 308-1396 (for informal or draft communications, please label "*PROPOSED*" or "*DRAFT*").

Dr. Hugh Jones

January 26, 2002


DR. HUGH M. JONES
PATENT EXAMINER
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